### **RAW SEQUENCE LISTING**

1:1:

1:1:

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number:

Source:

Date Processed by STIC:

ENTERED



**IFWP** 

RAW SEQUENCE LISTING DATE: 06/27/2006 TIME: 12:24:22 PATENT APPLICATION: US/10/583,503

Input Set : A:\15270C000110US.ST25.txt Output Set: N:\CRF4\06272006\J583503.raw

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3 <110> APPLICANT: Arumugham, Rasappa
             Prasad, A. Krishna
      6 <120> TITLE OF INVENTION: Methods of Producing Immunogenic A? Peptide Carrier
Conjugates
      8 <130> FILE REFERENCE: 15270C-000110US
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/583,503
C--> 11 <141> CURRENT FILING DATE: 2006-06-16
     13 <150> PRIOR APPLICATION NUMBER: WO PCT/US2004/044093
     14 <151> PRIOR FILING DATE: 2004-12-17
     16 <150> PRIOR APPLICATION NUMBER: US 60/530,481
     17 <151> PRIOR FILING DATE: 2003-12-17
     19 <160> NUMBER OF SEQ ID NOS: 54
     21 <170> SOFTWARE: PatentIn version 3.3
     23 <210> SEQ ID NO: 1
     24 <211> LENGTH: 6
     25 <212> TYPE: PRT
     26 <213> ORGANISM: Homo sapiens
     28 <400> SEQUENCE: 1
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     31 1
     34 <210> SEO ID NO: 2
     35 <211> LENGTH: 8
     36 <212> TYPE: PRT
     37 <213> ORGANISM: Homo sapiens
     39 <400> SEQUENCE: 2
     41 Asp Ala Glu Phe Arg His Asp Cys
     42 1
     45 <210> SEQ ID NO: 3
     46 <211> LENGTH: 10
     47 <212> TYPE: PRT
     48 <213 > ORGANISM: Homo sapiens
     50 <400> SEQUENCE: 3
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     56 <210> SEQ ID NO: 4
     57 <211> LENGTH: 13
     58 <212> TYPE: PRT
     59 <213> ORGANISM: Homo sapiens
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    67 <210> SEQ ID NO: 5
    68 <211> LENGTH: 10
     69 <212> TYPE: PRT
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(pg.6)

## RAW SEQUENCE LISTING DATE: 06/27/2006 PATENT APPLICATION: US/10/583,503 TIME: 12:24:22

Input Set : A:\15270C000110US.ST25.txt
Output Set: N:\CRF4\06272006\J583503.raw

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78 <210> SEQ ID NO: 6
79 <211> LENGTH: 12
80 <212> TYPE: PRT
81 <213> ORGANISM: Homo sapiens
83 <400> SEQUENCE: 6
85 Asp Ala Glu Phe Arg His Asp Gly Ala Gly Ala Cys
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89 <210> SEO ID NO: 7
90 <211> LENGTH: 14
91 <212> TYPE: PRT
92 <213> ORGANISM: Homo sapiens
94 <400> SEQUENCE: 7
96 Asp Ala Glu Phe Arg His Asp Ser Gly Gly Ala Gly Ala Cys
97 1
                   5
100 <210> SEQ ID NO: 8
101 <211> LENGTH: 17
102 <212> TYPE: PRT
103 <213 > ORGANISM: Homo sapiens
105 <400> SEQUENCE: 8
107 Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val Gly Ala Gly Ala
108 1
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111 Cys
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116 <211> LENGTH: 13
117 <212> TYPE: PRT
118 <213> ORGANISM: Homo sapiens
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122 Val Glu Tyr Gly Ser Asp His Arg Phe Glu Ala Asp Cys
123 1
126 <210> SEQ ID NO: 10
127 <211> LENGTH: 4
128 <212> TYPE: PRT
129 <213> ORGANISM: Homo sapiens
131 <400> SEQUENCE: 10
133 Gly Ala Gly Ala
134 1
137 <210> SEQ ID NO: 11
138 <211> LENGTH: 13
139 <212> TYPE: PRT
140 <213> ORGANISM: Homo sapiens
142 <400> SEQUENCE: 11
144 Pro Lys Tyr Val Lys Gln Asn Thr Leu Lys Leu Ala Thr
145 1
                                         10
148 <210> SEQ ID NO: 12
149 <211> LENGTH: 13
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DATE: 06/27/2006

TIME: 12:24:22

### Input Set : A:\15270C000110US.ST25.txt Output Set: N:\CRF4\06272006\J583503.raw 150 <212> TYPE: PRT 151 <213> ORGANISM: Homo sapiens 154 <220> FEATURE: 155 <221> NAME/KEY: misc feature 156 <222> LOCATION: (3)..(3) 157 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid 159 <400> SEQUENCE: 12 W--> 161 Ala Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala Ala Ala 162 1 165 <210> SEQ ID NO: 13 166 <211> LENGTH: 16 167 <212> TYPE: PRT 168 <213> ORGANISM: Homo sapiens 170 <400> SEQUENCE: 13 172 Glu Lys Lys Ile Ala Lys Met Glu Lys Ala Ser Ser Val Phe Asn Val 173 1 10 176 <210> SEQ ID NO: 14 177 <211> LENGTH: 10 178 <212> TYPE: PRT 179 <213> ORGANISM: Homo sapiens 181 <400> SEQUENCE: 14 183 Phe Glu Leu Leu Thr Arg Ile Leu Thr Ile 187 <210> SEQ ID NO: 15 188 <211> LENGTH: 19 189 <212> TYPE: PRT 190 <213> ORGANISM: Homo sapiens 192 <400> SEQUENCE: 15 194 Asp Gln Ser Ile Gly Asp Leu Ile Ala Glu Ala Met Asp Lys Val Gly 195 1 10 198 Asn Glu Gly 202 <210> SEQ ID NO: 16 203 <211> LENGTH: 14 204 <212> TYPE: PRT 205 <213> ORGANISM: Homo sapiens 207 <400> SEOUENCE: 16 209 Gln Val His Phe Gln Pro Leu Pro Pro Ala Val Lys Leu 10 210 1 213 <210> SEQ ID NO: 17 214 <211> LENGTH: 15 215 <212> TYPE: PRT 216 <213> ORGANISM: Homo sapiens 218 <400> SEQUENCE: 17 220 Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu Leu 10 221 1 224 <210> SEQ ID NO: 18 225 <211> LENGTH: 21 226 <212> TYPE: PRT 227 <213> ORGANISM: Homo sapiens

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/583,503

# RAW SEQUENCE LISTING DATE: 06/27/2006 PATENT APPLICATION: US/10/583,503 TIME: 12:24:22

Input Set: A:\15270C000110US.ST25.txt
Output Set: N:\CRF4\06272006\J583503.raw

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235 Ala Ser His Leu Glu
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240 <211> LENGTH: 15
241 <212> TYPE: PRT
242 <213> ORGANISM: Homo sapiens
244 <400> SEQUENCE: 19
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247 1
250 <210> SEQ ID NO: 20
251 <211> LENGTH: 51
252 <212> TYPE: PRT
253 <213> ORGANISM: Homo sapiens
255 <400> SEQUENCE: 20
257 Asp Ala Glu Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe
261 Ile Gly Ile Thr Glu Leu Cys Phe Asn Asn Phe Thr Val Ser Phe Trp
                20
                                     25
265 Leu Arg Val Pro Lys Val Ser Ala Ser His Leu Glu Asp Ala Glu Phe
                                40
266
269 Arg His Asp
270
       50
273 <210> SEQ ID NO: 21
274 <211> LENGTH: 42
275 <212> TYPE: PRT
276 <213> ORGANISM: Homo sapiens
278 <400> SEQUENCE: 21
280 Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
                                         10
284 Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
288 Gly Leu Met Val Gly Gly Val Val Ile Ala
                                40
289
            35
292 <210> SEQ ID NO: 22
293 <211> LENGTH: 22
294 <212> TYPE: PRT
295 <213> ORGANISM: Homo sapiens
297 <400> SEQUENCE: 22
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300 1
303 Ile Gly Ile Thr Glu Leu
307 <210> SEQ ID NO: 23
308 <211> LENGTH: 28
309 <212> TYPE: PRT
310 <213> ORGANISM: Homo sapiens
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## RAW SEQUENCE LISTING DATE: 06/27/2006 PATENT APPLICATION: US/10/583,503 TIME: 12:24:22

Input Set : A:\15270C000110US.ST25.txt
Output Set: N:\CRF4\06272006\J583503.raw

```
312 <400> SEQUENCE: 23
     314 Asp Ala Glu Phe Arg His Asp Phe Asn Asn Phe Thr Val Ser Phe Trp
     315 1
     318 Leu Arg Val Pro Lys Val Ser Ala Ser His Leu Glu
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     322 <210> SEQ ID NO: 24
     323 <211> LENGTH: 43
     324 <212> TYPE: PRT
     325 <213> ORGANISM: Homo sapiens
     327 <400> SEQUENCE: 24
     329 Asp Ala Glu Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe
                         5
                                              10
     333 Ile Gly Ile Thr Glu Leu Phe Asn Asn Phe Thr Val Ser Phe Trp Leu
                     20
                           .
                                          25
     337 Arg Val Pro Lys Val Ser Ala Ser His Leu Glu
     338
     341 <210> SEQ ID NO: 25
     342 <211> LENGTH: 22
     343 <212> TYPE: PRT
     344 <213> ORGANISM: Homo sapiens
     346 <400> SEQUENCE: 25
     348 Glu Phe Arg His Asp Ser Gly Gln Tyr Ile Lys Ala Asn Ser Lys Phe
     349 1
                                              10
     352 Ile Gly Ile Thr Glu Leu
     353
                     20
     356 <210> SEQ ID NO: 26
     357 <211> LENGTH: 20
     358 <212> TYPE: PRT
     359 <213 > ORGANISM: Homo sapiens
     362 <220> FEATURE:
     363 <221> NAME/KEY: misc_feature
     364 <222> LOCATION: (3)..(3)
     365 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
     367 <400> SEQUENCE: 26
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     370 1
     373 Phe Arg His Asp
     374
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     377 <210> SEQ ID NO: 27
     378 <211> LENGTH: 34
     379 <212> TYPE: PRT
     380 <213> ORGANISM: Homo sapiens
     383 <220> FEATURE:
     384 <221> NAME/KEY: misc_feature
     385 <222> LOCATION: (24)..(24)
     386 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
     388 <400> SEQUENCE: 27
     390 Asp Ala Glu Phe Arg His Asp Asp Ala Glu Phe Arg His Asp Asp Ala
     391 1
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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 06/27/2006 PATENT APPLICATION: US/10/583,503 TIME: 12:24:23

Input Set : A:\15270C000110US.ST25.txt
Output Set: N:\CRF4\06272006\J583503.raw

#### Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each/sequence which presents at least one n or Xaa.

Seq#:12; Xaa Pos. 3 Seq#:26; Xaa Pos. 3 Seq#:27; Xaa Pos. 24 Seq#:28; Xaa Pos. 3 Seq#:29; Xaa Pos. 10

### Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:43,44,45,46,47,48,49,50,51,52,53,54

VERIFICATION SUMMARY

DATE: 06/27/2006 TIME: 12:24:23

PATENT APPLICATION: US/10/583,503

Input Set : A:\15270C000110US.ST25.txt
Output Set: N:\CRF4\06272006\J583503.raw

L:10 M:270 C: Current Application Number differs, Replaced Application Number

L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:161 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0 L:369 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0 L:394 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:16

L:415 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:0

L:440 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:0